

JUNIOR-ENLISTED ENVIRONMENTAL-AWARENESS TRAINING

Subcourse EN 5700

EDITION C

United States Army Engineer School
Fort Leonard Wood, Missouri 65473

5 Credit Hours

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SUBCOURSE OVERVIEW

This subcourse is designed to inform soldiers of environmental-awareness initiatives. Environmental awareness is the United States (US) Army's commitment to ensuring that training and other activities cause minimal harm to the environment. Restoring previous environmental damage is a major concern for today's Army. Environmental-awareness training allows soldiers to understand, accept, and support environmental requirements. Soldiers should demonstrate awareness of these requirements and be capable of—

- Identifying the four components of the Army's environmental program.
- Describing the relationship between the environment and soldiers' actions.
- Identifying sources of environmental laws and regulations.
- Determining whether certain actions have positive or negative effects on the environment.
- Demonstrating environmental stewardship.

There are no prerequisites for this subcourse.

This subcourse reflects the doctrine that was current at the time the subcourse was prepared. In your own work situation, always refer to the latest publications.

Unless otherwise stated, the masculine gender of singular pronouns is used to refer to both men and women.

TERMINAL LEARNING OBJECTIVE:

ACTION: You will become aware of the responsibilities concerning laws, regulations, policies, and procedures associated with the environmental program. After viewing part one of television tape (TVT) 5-56 and completing this subcourse, you will be able to discuss environmental-awareness initiatives as they pertain to individual soldier actions and responsibilities.

CONDITION : You will be given this subcourse and [TVT 5-56P1](#), "*Operation Stewardship- The Soldier and the Environment*".

STANDARD: You must achieve a minimum of 70 percent on the subcourse examination to demonstrate competency on this task.

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LESSON 1

THE ARMY, THE SOLDIER, AND THE ENVIRONMENT

OVERVIEW

LESSON DESCRIPTION:

This lesson discusses the US Army's environmental position and explains the four environmental pillars as they relate to training and operations.

TERMINAL LEARNING OBJECTIVE:

ACTION: You will learn to describe the Army's environmental position as it relates to Army training and operations.

CONDITION: You will be given the material contained in this lesson. You will work at your own pace and in your own selected environment with no supervision.

STANDARD: You will correctly answer questions on the practice exercise at the end of the lesson.

REFERENCES : The material contained in this lesson was derived from AR 200-1, AR 200-2, [FM 3-100.4](#), FM 6-22, [TC 3-34.489](#), *US Army Environmental Strategy into the 21st Century*, and [TVT 5-56P1](#).

INTRODUCTION

To accomplish environmental responsibilities effectively, you must know what it takes to be a good steward in the environmental awareness program. To be a good steward, you must learn and understand not only how the environment affects everyday training and operations, but also how everyday duties affect the environment. Soldiers must train to fight a war anywhere in the world, without causing or by minimizing harm to the environment. The military must confront its environmental responsibilities. Currently, the Department of Defense (DOD) must clean up more than 20,000 sites suspected of being contaminated with toxic materials. The Army is responsible for many of the sites that are littered with hazards such as paints, solvents, ammunition, and fuel. Preventing this damage would have been far less costly than cleaning up these sites.

1-1 Environmental Vision. Caring for the environment begins with the Army's vision of environmental responsibility. The US Army Environmental Strategy into the 21st Century describes what the Army expects of soldiers:

"The Army will integrate environmental values into its mission in order to sustain readiness, improve the soldier's quality of life, strengthen community relationships, and provide sound stewardship of resources."

- a. Taking care of the environment protects human health and safety and guards natural resources. For example, when fuel spills on the ground, it soaks into the soil, poisons plants, and eventually enters streams and lakes that supply drinking water.
- b. Caring for the environment also supports the Army mission. Costly environmental cleanups detract from Army readiness. During war, many wise tactical, medical, or operations security (OPSEC) practices are also good environmental practices. Handling fuels safely, maintaining vehicles, disposing of solid waste/hazardous waste (HW), and managing and turning in ammunition properly are sound environmental and tactical considerations that carry over from training into combat operations.
- c. Many practices that damage the environment waste time and do not lead to success in combat. One example occurred during the Gulf War when Iraqi soldiers set fire to Kuwaiti oil fields and poured millions of gallons of crude oil into the Persian Gulf. The Iraqi Army deliberately damaged environmental resources and wasted valuable time and effort on activities that did not stop the allies' advance. Remember, environmental stewardship does not prevent the Army from fighting and winning wars; it supports the Army mission.

1-2. Environmental Ethic. [FM 22-100](#), *Army Leadership*, defines ethics as principles or standards that guide soldiers and professionals to do the moral or right thing. The environmental ethic is as follows:

"We will take care of the environment because it is the right thing to do."

- a. The Army's environmental ethic is the operating principle and value governing soldiers, units, and the entire Army. Damage to land, water, and air can be reduced by considering the effects of training, operations, and logistical activities on the environment and by properly managing hazardous material and waste properly. Doing what is best for the environment helps ensure that space will be available to conduct future training. Soldiers put this ethic into practice by—
 - Complying with installation environmental policies, unit standing operating procedures (SOPs), AR, and environmental laws and guidelines.
 - Preventing environmental damage and pollution by making sound decisions that will not harm the environment.
 - Advising the chain of command when unit actions do not comply with environmental guidelines.
 - Supporting the Army recycling program.
 - Reporting hazardous material (HM) and HW spills immediately.
 - Making sound environmental decisions in the absence of a supervisor or proper guidance.

b. Stewardship is the key element in the Army's environmental ethic. The Army's leaders, from squad leader to company commander, serve as basic environmental stewards. They have a professional and personal responsibility to understand and support the Army's environmental program. The Army is charged with protecting and defending the nation and its people, including safeguarding the environment. The Army is entrusted with more than 12 million acres (almost 19,000 square miles) of federal land. The American people expect the Army to use and manage these resources wisely. Environmental stewardship must be built into everything that units and soldiers do to—

- Enhance combat readiness.
- Ensure mission completion.
- Conserve the fighting strength.
- Protect the environment.
- Reduce current and future costs for environmental restoration.

1-3. Strategy. Based on the vision and the ethic, the Army seeks to conduct operations that are environmentally sustainable, enhance the quality of life, and improve national security. The Army's strategy is to—

- Comply with all environmental laws and regulations.
- Prevent pollution at the source by reducing, reusing, or recycling materials that cause pollution.
- Conserve and preserve natural and cultural resources so that they will be available for present and future generations.
- Restore contaminated sites as quickly as possible.

[Figure 1](#) shows the Army's environmental strategy model. This strategy is founded on the bedrock of shared national values, which ties the Army to the nation and gives it stability. The key building blocks—people, resources, communication, management, and organization—provide the foundation for all Army activities, including environmental stewardship. These building blocks support the Army's tradition of leadership. Strong commitment to each part of the foundation is critical to ensure a solid base for environmental initiatives and long-term success. Army leadership, coupled with the building blocks, provides a sound footing for the four pillars of compliance, restoration, prevention, and conservation. These pillars represent parts of the environment that must work together.

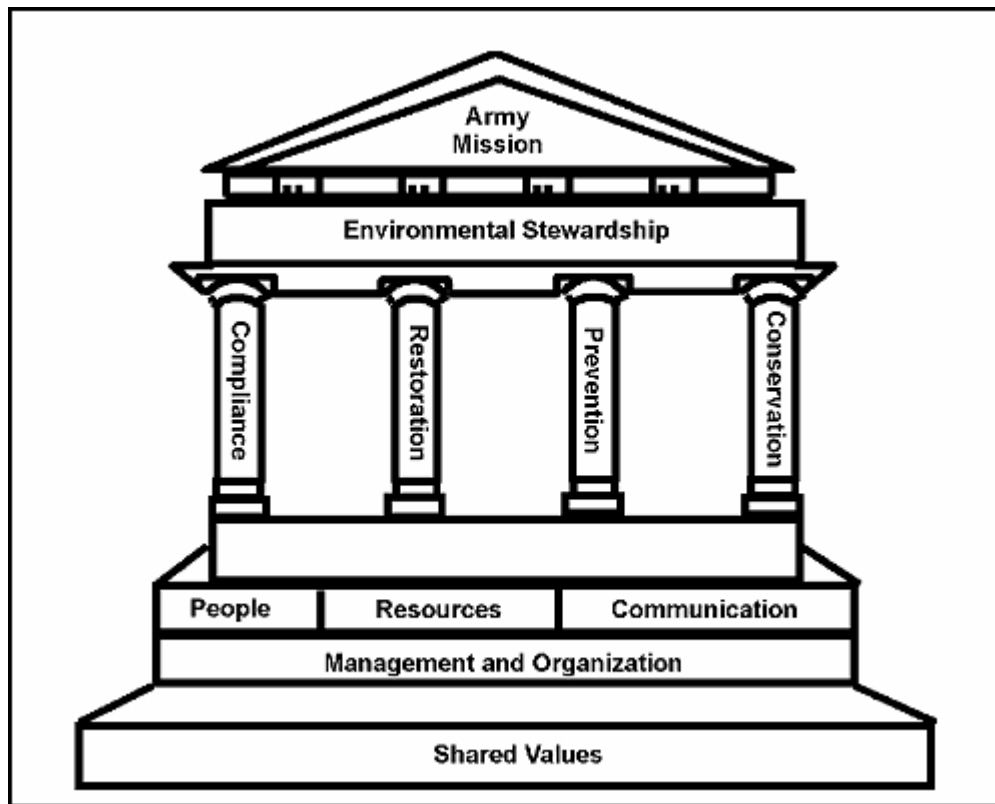


Figure 1. Army's environmental strategy model

The environmental model shows how these four pillars support environmental stewardship. The Army mission, at the top, requires the Army to manage and use natural resources wisely. Just as a building's walls support its roof, the model's four pillars support environmental stewardship. Environmental stewardship, in turn, supports the Army mission.

- a. Compliance. Compliance with environmental regulations is now a necessary cost of doing business. The Army expects soldiers to obey local, state, federal, and host nation (HN) environmental requirements. By following the unit environmental SOP, the environmental guidance that leaders publish in operation orders (OPORDs), and installation environmental regulations, soldiers can help the Army meet its compliance goal.
- b. Restoration. Most soldiers do not have any restoration responsibilities. However, to make the installation a safer place for soldiers and their families, the Army is cleaning up its contaminated sites. By following the principles under the other three environmental pillars, soldiers can help the Army eliminate the need for a restoration pillar.
- c. Prevention. Prevention is the Army's attempt to reduce or eliminate pollution. Preventing pollution is always more effective and less costly than cleaning up polluted sites. Soldiers can support prevention efforts by reducing, reusing, or recycling waste products.
 - (1) Reduce. If soldiers perform a job carefully, they can often reduce the amount of pollution produced. For example:

- Storing cans of paint properly prevents the paint from ruining and prevents pollution.
- Using floor sweep compound carefully reduces the amount of floor sweep required to clean up oil spills.
- Using less harmful products reduces the toxicity of the waste generated.
- Using soap and water instead of harmful solvents reduces the amount of harmful materials produced and prevents pollution.

(2) Reuse. Reusing products reduces the amount of trash that must be taken to commercial landfills. Instead of throwing things away, reuse them. For example:

- Use both sides of notepaper before throwing it away.
- Select products that have refillable containers.
- Collect and reuse rags in the arms room or the motor pool.

(3) Recycle. Prevent pollution by recycling. Many products the Army uses can be recycled. These include paper, aluminum cans, radiators, batteries, pavement, and scrap metal. The installation can often sell recyclable materials and raise funds for things like recreation facilities.

d. Conservation. Included in the conservation pillar are two different types of resource management—conservation and preservation. Conservation focuses on responsibly using land to ensure long-term, natural resource productivity. Preservation, which focuses on resource protection, is essential for ensuring the future integrity of valuable national resources. The Army exercises numerous preservation techniques and programs. These programs are exercised in concert with programs of the Soil Conservation Service, the Fish and Wildlife Service, and other federal and state agencies. All are devoted to land use and conservation, training area maintenance, and preservation of natural resources and historic and cultural sites. Preservation is needed to ensure the future integrity of valuable national resources such as species' habitats and historical and cultural sites. As stewards of natural and cultural resources, the Army practices preservation.

1-4. Stewardship. Along with the Army training on a vast amount of acreage, comes the responsibility of stewardship—safeguarding and enhancing our vital resources. The Army must guarantee the continuing usefulness of land by protecting the environment from the effects of current and future training operations.

a. The following environmental elements could potentially be affected through Army training and operations:

(1) Forests. The Army is responsible for approximately one million acres of timberland. These forests provide realistic training environments and are a valuable source of wildlife habitat. Over 100 installations have programs for land use, conservation, and maintenance to keep training areas healthy.

(2) Natural bodies of water and wetlands. Many Army installations include wetlands. In recent years, we have learned just how crucial wetlands are to the nation's environment. They are highly sensitive and productive areas that provide breeding, rearing, and feeding grounds for fish and wildlife.

(3) Rangelands. Keeping training areas healthy is a top priority. Over 100 major Army installations have special management programs devoted to land-use conservation and maintenance. The Army works closely with the Soil Conservation Service and the Forest Service to improve soil, rangeland, and forest management. Farming and grazing are important parts of land revitalization. Land revitalization projects benefit the Army and the local farming communities. Grazing helps reduce hazards from fire, while agriculture restores and controls erosion.

(4) Threatened and endangered species. The Army plays an important role in protecting and managing threatened and endangered plants and animals. Military leaders should take steps to protect and manage the habitats that these plants and animals need to survive and flourish.

(5) Wildlife. The Army is working with other government agencies to provide a foundation for wildlife and nature studies on Army lands. Through the Watchable Wildlife Program, the Army is developing a national network of wildlife observation sites.

(6) Historical and archaeological sites and structures. The Army manages and protects national cultural resources such as buildings, landmarks, and Native American archaeological sites.

b. These are just a few examples of how the Army affects the environment. It is difficult to live or train in areas that have been destroyed, but it is equally difficult to prevent this destruction from happening. Maintaining an environmental balance on a military installation is a difficult task. The Army employs highly trained specialists to manage these areas, but they cannot do everything required. A soldier's contribution can make a big difference in environmental matters.

c. If Army members are not good stewards of the environment and their training facilities, the Army will face increased scrutiny by environmental groups, Congress, and local, state, and federal regulatory agencies. Your compliance with regulations will enhance training areas and the Army's readiness. It will also ensure that land is available for Army operations and training.

1-5. Summary. The Army is integrating environmental considerations into its approach to warfighting. This ensures that as the Army fights and wins future conflicts, its approach will strive to protect and preserve valuable resources (soldiers and materials) and the natural environment.

Lesson 1

Practice Exercise

Instructions The following exercises are study aids. Answer each question in the space provided. When you have finished, print this sheet and compare your answers with those given by following the link at the bottom of this page. Review the lesson as necessary.

1. What is the environmental ethic?

2. What is the key element of the Army's environmental program?

3. Name the four environmental pillars.

4. Name the six environmental elements that could potentially be affected by Army training and operations.

Practice Exercise Answers

1. What is the environmental ethic?

FM 22-100 defines ethics as principles or standards that guide soldiers and professionals to do the moral or right thing. The environmental ethic is as follows: *"We will take care of the environment because it is the right thing to do."*

([para 1-2](#))

2. What is the key element of the Army's environmental program?

Stewardship. ([para 1-2b](#))

3. Name the four environmental pillars.

The four environmental pillars are: Compliance, Restoration, Prevention and Conservation.

([para 1-3](#))

4. Name the six environmental elements that could potentially be affected by Army training and operations.

- a. Forests.
- b. Natural bodies of water and wetlands.
- c. Rangelands.
- d. Threatened and endangered species.
- e. Wildlife.
- f. Historical and archaeological sites and structures.

([para 1-4a\[1\] through \[6\]](#))

LESSON 2

PROTECTING THE ENVIRONMENT

OVERVIEW

LESSON DESCRIPTION:

This lesson addresses the environmental impact of Army training and operations.

TERMINAL LEARNING OBJECTIVE:

- ACTION:** You will learn to identify your environmental responsibilities as well as training and operations that affect the environment.
- CONDITION:** You will be given the material contained in this lesson. You will work at your own pace and in your own selected environment with no supervision.
- STANDARD:** You will correctly answer questions on the practice exercise at the end of the lesson.
- REFERENCES :** The material contained in this lesson was derived from AR 200-1, AR 200-2, [FM 3-100.4](#), [TC 3-34.489](#), and [TVT 5-56P1](#).

INTRODUCTION

The US Army must prepare for combat anywhere in the world and against any type of enemy. To win on the modern battlefield, the Army must practice in peacetime for the first battle of the next war. Soldiers are the Army's first line of defense in protecting the environment. They must safeguard the environment where they work and live. By making good environmental decisions, soldiers can make a difference. Leaders must practice combat techniques, and training must simulate actual battlefield conditions as much as possible. To train for combat requires large expanses of land and airspace. Conserving the limited number of training areas currently available is a major problem for the Army at all levels.

2-1. The Environment. A soldier's actions have an effect on the environment each day. If something is poured onto the ground or into a storm drain, it may pollute the drinking water. Chemicals that soak into the soil contaminate plants and eventually enter lakes, ponds, and aquifers. Once these chemicals enter primary water sources, it is only a matter of time before they contaminate the drinking water. Actions taken to prevent contamination are inherently more effective and efficient than actions taken to remedy a situation.

2-2. Soldier Actions. The Army wants soldiers to think about the environmental consequences of their actions before they act. Each time soldiers begin a task, they should ask, "How will this activity affect the environment?"

a. Answering this question begins the process of assessing the environmental risks associated with the job. Here are some common situations in which a soldier's actions affect the environment:

- Vehicle maintenance.
- Weapons maintenance and cleaning.
- Nuclear, biological, and chemical (NBC) equipment and decontamination equipment maintenance.
- Supply, storage, and transportation.
- Vehicle refueling.
- Field sanitation.
- Maneuver damage control.
- Field recovery.
- Weapons training and demolition.

b. Beginning in the unit area, soldiers perform maintenance and training using their assigned equipment. During training or deployment, soldiers use the equipment and supplies to perform their missions in a field environment. Before redeploying or returning from training, soldiers account for equipment, supplies and waste materials. Upon returning to the unit area, soldiers clean their equipment and prepare for the next mission. In each of these situations, soldiers perform their jobs in an environmentally sound manner.

2-3. Vehicle Maintenance. During vehicle maintenance, fuels, oils, coolant, or other fluids may be spilled. Clean up spills immediately to eliminate hazards that could lead to personal injury (usually by slipping and falling). This also gives the spill less time to soak into the ground, which helps conserve water resources. Take simple precautions (place drip pans, diapers, or absorbents under vehicles) to prevent or reduce pollution. Keep a copy of the applicable material safety data sheet (MSDS) for each HM on hand in a binder in the motor pool.

a. Compliance. Disposing of products as specified in unit SOPs and installation regulations will help reduce solid waste. Maintaining and operating vehicles and other equipment, including oil-water separators, according to specifications in applicable TMs will help reduce air and noise pollution.

b. Prevention. Protect the environment by using the following guidelines:

- Reduce solid waste and HW by preparing the work site with absorbents, drip pans, and rags to catch small leaks and drips. This will minimize the impact of leaks and spills. Clean up spills immediately, using just enough materials to get the job done.

- Reuse rags and floor sweep. Place rags in a dirty rags container, and have them laundered. Collect used dry sweep and reuse it several times. Take leftover items, such as paint or excess parts, to the installation reissue center so that other units can use them.
- Recycle HM, such as solvents and coolants, and return damaged parts and assemblies to the supply facility for rebuilding or recycling.

2-4. Weapons Maintenance. Solvents, cleaners, and lubricants used to clean weapons can be hazardous to the environment because they evaporate and contaminate the air. Keep solvent vat lids closed to minimize air pollution. Use absorbent floor sweep under solvent vats to catch leaks and spills. Used floor sweep, patches, and brushes are contaminated with harmful solvents and metal particles, so dispose of them properly to prevent them from spreading contamination to landfills. Keep a copy of the applicable MSDS for each HM on hand in a binder in the arms room

- a. Compliance. Follow installation guidelines for disposing of HW (solvents) and solid waste (damaged parts) whether in the field or in a garrison environment. Collect these waste products close to the places where they are created, and dispose of them often. Also, follow the cleaning guidelines in the applicable TM.
- b. Prevention. Avoid harming the environment during weapons maintenance by using the following guidelines:
 - Reduce the use of hazardous cleaning solvents and solutions by substituting less hazardous solvents and solutions when permitted. Use just enough solvent or lubricant to maintain the weapon to TM specifications.
 - Reuse cleaning equipment and lubricant containers when possible. Purchase lubricants in bulk, and refill smaller containers.
 - Recycle cleaning solvents as part of the installation solvent reclamation program.

2-5. Nuclear, Biological, and Chemical (NBC) Equipment Maintenance. NBC training presents situations that require sound environmental decisions. The used filters and cleaning materials may contribute to persistent pollution problems. Store HM, such as decontaminant solution 2 (DS2), carefully. Ensure that containers have appropriate drip pans or other forms of secondary containment under them. Keep a copy of the applicable MSDS for each HM on hand in a binder in the NBC room. During field training, collect used chemical detection equipment and dispose of it according to installation regulations.

- a. Compliance. Many pieces of NBC equipment can be damaged during maintenance by not following the procedures in the applicable TM. This adds to disposal problems. Collect HM, such as used filters, decontamination materials, and cleaning solutions, at the point of generation and dispose of them properly. Be very careful with detection equipment because it may contain small amounts of radioactive isotopes. Unit NBC noncommissioned officers (NCOs) should ensure that all collected materials are properly marked and turned in.
- b. Prevention. Support installation environmental goals by using the following guidelines:

- Reduce the use of hazardous cleaning solvents and solutions by substituting less hazardous solvents and solutions when permitted.
- Reuse mask carriers and cleaning equipment. Turn in excess repair parts so that other units may use them.
- Recycle solid waste, including damaged or broken components and batteries. Many of these items contain harmful substances, such as tritium or lithium.

2-6. Supply, Storage, and Transportation. Supply and storage facilities often contain HM. Take precautions when storing and transporting these materials. Do not assume that they can be thrown into the trash or poured down a drain. Turn in excess paint, solvents, cleaners, and supplies to the installation supply point. These materials can be reissued to other units. Keep a copy of the applicable MSDS for each HM on hand in a binder in the storage area.

- a. Compliance. Store materials according to manufacturers' guidelines, as stated on the MSDS. Use older items first, ensure that new items are labeled and dated, and place new items to the back of the storage area.
- b. Prevention. Support installation environmental goals in supply areas by following the guidelines:
 - (1) Reduce the amount of solid waste and HW in the supply room by avoiding stockpiling or keeping items around "just in case they are needed." When possible, select items that have less packaging, are less hazardous, or are easily recycled. Dispose of all waste according to the unit SOP, but do not wait until a container is full before arranging for proper disposal.
 - (2) Reuse containers when possible. Try to purchase supplies such as cleaning solutions or lubricants in bulk, and refill smaller containers as needed. Containers should be appropriately labeled and compatible with the material stored.
 - (3) Recycle materials as required by the installations recycling program. Keep recycling containers free of trash and garbage. Turn in excess or damaged repair parts and tools as stated in the unit maintenance or supply SOP. These parts will be rebuilt, repaired, and returned to the maintenance system.

2-7. Refueling. Pay close attention during refueling operations because of the potential for spills and fires. Taking simple precautions prevents large pollution problems. Clean up spills immediately. During refueling, protect the environment, and dispose of contaminated soil according to installation policies and unit SOPs.

- a. Compliance. Follow the unit SOP concerning the types and quantities of items to be stored at a fuel point. The unit SOP should specify to place the refueling nozzle in a drip pan and not on the ground. It should address placing drip pans or absorbent material, such as floor sweep, under vehicles being refueled to catch any overflow. Maintain a properly stocked spill kit, and ensure that it is readily available.
- b. Prevention. Protect the environment by using the following guidelines:

- (1) Reduce the amount of soil contaminated during refueling by not spilling fuel. Pay attention at all times when refueling; do not lock the nozzle open and walk away. When refilling or storing fuel cans, place them in a drip pan to catch any overflow or leaks.
- (2) Reuse rags and absorbent material. Reuse overpack drums for transferring contaminated soil. When the rags become soaked, have them laundered and reuse them.
- (3) Recycle used or contaminated petroleum, oils, and lubricants (POL). Depending on state and local requirements, the unit may have accumulation containers for used fuel, oil, and other POL.

2-8. Field Sanitation/Field Mess. Field sanitation activities, including pest control, latrines, mess operations, and medical-waste disposal affect the environment. Limit the use of pesticides within training areas, bivouac sites, and ranges. Pesticides can create contamination that lasts for years. Instead, use insect repellent to ward off mosquitoes and flies. Keep a copy of the applicable MSDS on hand for each HM.

- a. Compliance. The unit field SOP should instruct where and how to emplace latrines, dispose of kitchen waste, and collect medical waste. Enforce the use of field latrines instead of expedients such as "catholes." Human waste attracts additional pests, spreads disease and contaminates runoff water. Use caution when disposing of any substance in the field. In many states, even the water used in immersion heaters must be disposed of in a sanitary sewer system due to metal contamination from the garbage can.
- b. Prevention. Ensure that field sanitation practices prevent harm to the environment by using the following guidelines:
 - (1) Reduce the spread of litter and solid waste by collecting it at the source (mess site, aid station, or issue point). Reduce the amount of spoiled materials that must be thrown away by storing perishable items properly.
 - (2) Reuse waste accumulation containers. Select sturdy, reusable containers, such as barrels. Ensure that they have lids to keep out weather and pests.
 - (3) Recycle solid waste that accumulates during the field situations. Batteries, ammunition packing, and cardboard containers can be recycled if collected properly and turned in.

2-9. Maneuver Damage Control. When training areas are stripped of vegetation, they lose valuable concealment, and erosion often prevents further use. Plan to conserve resources before going to the field. Reduce erosion risks by conducting off-road driving only in authorized areas, and cross streams only at approved crossing points. Additionally, fill in fighting positions before leaving an area to reduce erosion problems and make the area safer. Finally, use camouflage netting instead of branches and shrubs.

- a. Compliance. In an area that contains historical artifacts or threatened or endangered species, assess the environmental risk before going to the field. When identifying a potential hazard, develop a plan to eliminate or control the risk. Check the driving and convoy requirements for

the installation. In some states, installations may receive fines for raising too much dust when vehicles convoy to and from training sites. Maintain a properly stocked spill kit, and ensure that it is readily available.

b. Prevention. To further prevent maneuver damage problems adhere to following guidelines:

(1) Reduce the likelihood of creating a spill by securing cargo properly. Traveling with open or loose containers or driving carelessly creates a potential for spills.

(2) Reuse wire, barrier materials, and sandbags.

(3) Recycle materials that are collected at collection points (CPs), latrines, maintenance facilities, aid stations, and mess facilities.

2-10. Field Recovery. Taking care of equipment develops an important habit that helps the Army prepare for combat, and it conserves natural resources. When returning from training, account for all of the equipment and then clean it. Bring all of the trash and waste back for proper disposal. Wash the equipment at approved wash sites that have oil-water separators. Prevent pollution, and protect yourself by making sound environmental decisions during every recovery operation.

a. Compliance.

(1) Upon departing the training area, return all waste to the containment area. Do not bury any waste materials. Collect unused munitions, and turn them in. Police all brass, wire (communication, concertina, and barbed), and litter before departure.

(2) Use only approved wash racks. When washing equipment in a parking lot or a maintenance area, the runoff enters storm drains and runs into streams and rivers, causing pollution. The same is true when washing a vehicle in a lake, stream or pond.

b. Prevention. Use the following guidelines—

(1) Reduce pollution at the wash rack by using only approved solvents or detergents when washing vehicles. Using unapproved soaps, detergents, and solvents can clog the oil-water separator, causing it to back up and overflow.

(2) Reuse barbed wire, barrier material, and communication wire. When finished with these materials, turn them in to unit supply to ensure that they are available for future use and the area is safe for wildlife. Also, reuse cleaning materials such as brushes and rags.

(3) Recycle worn out or damaged equipment rather than throw it out.

2-11. Weapons Training and Demolition. Citizens living near firing ranges sometimes complain about noise from weapons training and demolition. When these complaints result in letters to local newspapers, letters to Congress or litigation, they can lead to curtailment of the soldier's ability to train realistically. Although the primary responsibility for preventing noise complaints belongs to the operations officer (Operations and Training Officer [US Army] [S3] or Assistant Chief of Staff, Operations and Plans [US Army] [G3]) and the installation master planning office, there are ways that individual soldiers can help the effort

a. Compliance. When selecting artillery-firing points close to the installation boundary, check with the range control office to ensure that there are no noise sensitive buildings nearby. When conducting air-to-ground gunnery or nap-of-the-earth flying, check with airfield operations for no-fly zones due to noise sensitive homes or livestock. When conducting night training, comply with nighttime curfews or seek an exception to policy in weight limits designated in installation range control regulations.

b. Prevention. Use the following guidelines—

(1) Maintain mufflers on vehicles and generators. When motor pools or military roads are near housing, avoid unnecessary noise from revving engines or excessive speed. If an installation has a history of noise complaints from demolition training or explosive ordnance disposal (EOD), avoid detonating under the following conditions:

- Days of steady wind (8 to 16 kilometers per hour) with gusts of greater velocity in the direction of nearby residences.
- Days that are clear with a layering of smoke or fog.
- Mornings that are cold, hazy, or foggy.
- Days following a day with extremes of temperature between day and night.
- Days with high barometer readings and low temperatures.

(2) If a site for mock skirmishes with simulators and blank ammunition is within 500 meters of homes, use the forest as a buffer. Avoid open fields and water. Aim firearms away from homes.

2-12. Summary. The Army and the American people believe that soldiers have a professional responsibility to protect the environment. Soldiers can do that by making smart environmental decisions, which is not difficult to do. Performing a job in an environmentally smart manner protects the environment where people work and live.

Lesson 2

Practice Exercise

Instructions The following exercises are study aids. Answer each question in the space provided. When you have finished, print this sheet and compare your answers with those given by following the link at the bottom of this page. Review the lesson as necessary.

1. Name three common situations in which a soldier affects the environment.

2. During vehicle maintenance what precautions can a soldier take to prevent or reduce pollution?

3. How can a soldier control maneuver damage?

4. What effect does washing vehicles in unprotected waterways have on the natural environment?

A large, empty rectangular box with a thin black border, intended for the user to write their answer to the question above.

Practice Exercise Answers

1. Name three common situations in which a soldier affects the environment.

The following are some common situations in which a soldier affects the environment:

- Vehicle maintenance.
- Weapons maintenance and cleaning.
- NBC equipment and decontamination equipment maintenance.
- Supply, storage, and transportation.
- Vehicle refueling.
- Field sanitation.
- Maneuver damage control.
- Field recovery.
- Weapons training and demolition.

([para 2-2a](#))

2. During vehicle maintenance what precautions can a soldier take to prevent or reduce pollution?

During vehicle maintenance, fuels, oils, coolants, or other fluids may be spilled. Take simple precautions, such as placing drip pans, diapers, or absorbents under vehicles to prevent or reduce pollution.

([para 2-3](#))

3. How can a soldier control maneuver damage?

Risks can be reduced by conducting off-road driving only in authorized areas, crossing streams only at approved points, filling in fighting positions before leaving an area, and using camouflage netting instead of branches and shrubs.

([para 2-9](#))

4. What effect does washing vehicles in unprotected waterways have on the natural environment?

When soldiers wash equipment in a parking lot or a maintenance area, runoff enters storm drains and runs into streams and rivers, causing pollution. ([para 2-10a\(2\)](#))

LESSON 3

ENVIRONMENTAL RESPONSIBILITY

OVERVIEW

LESSON DESCRIPTION

This lesson discusses the US Army's environmental responsibility and the soldier's personal responsibility.

TERMINAL LEARNING OBJECTIVE:

- ACTION:** You will learn to identify Army and personal training responsibilities that affect the environment.
- CONDITION:** You will be given the material contained in this lesson. You will work at your own pace and in your own selected environment with no supervision.
- STANDARD:** You will correctly answer questions on the practice exercise at the end of the lesson.
- REFERENCES:** The material contained in this lesson was derived from AR 200-1, AR 200-2, [FM 3-100.4](#), [TC 3-34.489](#), and [TVT 5-56P1](#).

INTRODUCTION

The Army's environmental vision sets goals that the Army will try to achieve. Applying the strategy of compliance, prevention, and conservation to a job is one way to help achieve these goals. The Army has accepted its environmental responsibilities, but the Army's environmental ethic places responsibility on soldiers to make good environmental decisions each day.

3-1. Army Responsibility. The Army is responsible for taking care of the resources entrusted to it by the American people, and this includes the environment. It is not only morally right, but by caring for the environment, the Army avoids expensive cleanups that detract for readiness and limit the Army's ability to wage war.

- a. Based on its commitment to environmental protection, the Army will conduct its operations in ways that minimize environmental impacts. The Army will—
 - Comply with all environmental laws and regulations. This includes federal, state, local, and HN laws.
 - Prevent pollution at the source by reducing, reusing, and recycling material that causes pollution.

- Conserve and preserve natural and cultural resources so that they will be available for present and future generations.

b. Soldiers can support these efforts by—

- Complying with installation environmental policies, unit SOPs, ARs, and environmental laws and guidelines.
- Preventing environmental damage and pollution by reducing, reusing, and recycling waste material.

3-2. Personal Responsibility. Everyone faces situations that require him or her to make decisions concerning the environment. The decision may be whether to empty a bucket of solvent on the ground or carry it to an accumulation point. To make good decisions, ask yourself the following questions:

- What are my orders? Look to your leaders for guidance, and ensure that you understand what they expect. If instructions are unclear or confusing, ask for help. Review unit SOPs for environmental guidance.
- What have I been trained to do? Ask this question in the absence of specific orders or guidance. This manual provides guidance on how to perform tasks in an environmentally safe manner. Following these guidelines ensures compliance with federal environmental guidelines.
- What does my concept of right and wrong tell me to do? Ask this question in the absence of training and orders. Most people know when an action will harm the environment. Do not perform environmentally dangerous tasks without proper guidance, especially if you have not been trained on the task or if you doubt it is correct.

3-3. Summary. The Army expects soldiers to share its vision of environmental protection. By complying with environmental regulations, preventing pollution and conserving resources, soldiers can support the Army's vision and its environmental goals.

Lesson 3

Practice Exercise

Instructions The following exercises are study aids. Answer each question in the space provided. When you have finished, print this sheet and compare your answers with those given by following the link at the bottom of this page. Review the lesson as necessary.

1. Describe the Army's responsibilities.

2. Based on its commitment to environmental protection, the Army will conduct its operations in ways that minimize environmental impacts. How will the Army do this?

3. How can a soldier support the Army's efforts?

4. A soldier also has a personal responsibility. What questions can soldiers ask of themselves to ensure they are fulfilling this responsibility?

Practice Exercise Answers

1. Describe the Army's responsibilities.

The Army is responsible for taking care of the resources entrusted to it by the American people, and this includes the environment.

(para 3-1)

2. Based on its commitment to environmental protection, the Army will conduct its operations in ways that minimize environmental impacts. How will the Army do this?

The Army will conduct its operations in ways that minimize environmental impacts by—

- Complying with all environmental laws and regulations. This includes federal, state, local, and HN laws.
- Preventing pollution at the source by reducing, reusing, and recycling material that causes pollution.
- Conserving and preserving natural and cultural resources so that they will be available for present and future generations.

(para 3-1a)

3. How can a soldier support the Army's efforts?

Soldiers can support the Army's efforts by—

- Complying with installation environmental policies, unit SOPs, ARs and environmental laws and guidelines.
- Preventing environmental damage and pollution by reducing, reusing and recycling waste material.

(para 3-1b)

4. A soldier also has a personal responsibility. What questions can soldiers ask of themselves to ensure they are fulfilling this responsibility?

Soldiers also have a personal responsibility to the environment. To make good decisions, soldiers can ask themselves—

- What are my orders?
- What have I been trained to do?
- What does my concept of right and wrong tell me to do?

(para 3-2)

LESSON 4

ENVIRONMENTAL LAWS AND REGULATIONS

OVERVIEW

LESSON DESCRIPTION:

This lesson discusses the laws and regulations that impact Army training and operations and the fines and penalties that can be imposed on Army members for noncompliance.

TERMINAL LEARNING OBJECTIVE:

- ACTION:** You will learn sources of laws and regulations that you must know to perform your missions while minimizing harm to the natural environment.
- CONDITION:** You will be given the material contained in this lesson. You will work at your own pace and in your own selected environment with no supervision.
- STANDARD:** You will correctly answer questions on the practice exercise at the end of the lesson.
- REFERENCES :** The material contained in this lesson was derived from AR 200-1, AR 200-2, [FM 3-100.4](#), [TC 3-34.489](#), and [TVT 5-56P1](#).

INTRODUCTION

Environmental issues are a major concern for the Army. With new laws and regulations, these issues continue to have a growing impact on Army operations. Violations of federal, state, or local environmental laws can result in both civil and criminal penalties. Soldiers and leaders must understand the laws and know what actions to take. They must also ensure that unit personnel are trained properly and meet all requirements. The environmental laws and regulations in this section are not all inclusive, but they represent those most applicable to soldiers. For further information about these and other laws, ask the chain of command or the installation staff judge advocate or environmental office.

4-1. Environmental Laws. There are four primary sources of environmental law: federal, state, local, and HN. These four sources have established laws and regulations to protect civilian and military communities and the natural and cultural environments from environmental degradation. Heightened environmental awareness by citizens and the federal government has led agencies to develop policies to support regulatory compliance and stewardship.

4-2. Federal Law. Federal laws are enacted by Congress and enforced by federal agencies such as the Environmental Protection Agency (EPA), the Department of Transportation (DOT), and the Army.

Once an agency determines how to enforce the laws, it develops regulations. In this way, Army environmental regulations are based on federal laws. Soldiers should understand the following federal environmental laws. They affect many of the activities that soldiers perform each day.

a. National Environmental Policy Act (NEPA). The NEPA requires the Army to determine the environmental impact of proposed actions. If a proposed action will harm the environment, the Army must develop a plan to eliminate or minimize the damage. Soldiers comply with NEPA by —

- Considering the environmental consequences of their actions.
- Following environmental guidelines set forth in unit SOPs, installation regulations, and mission orders.

b. Resource Conservation and Recovery Act (RCRA). The RCRA governs how the Army identifies, transports, stores, and disposes of HM and HW. It places "cradle-to-grave" responsibility for HW on the personnel or units generating the waste. It also governs recycling and reusing nonhazardous material and waste. Used munitions can become a regulated HW in some cases. Soldiers comply with RCRA by—

- Supporting the installation's recycling program.
- Removing materials (expended brass, communications wire, concertina, booby traps, unused munitions, and propellant charges) from training sites.
- Conducting police calls to collect and dispose of solid waste.
- Collecting and turning in HW and HM according to unit SOPs.
- Knowing what HM they use on the job or at home.
- Knowing what HW they produce as they perform their jobs.

c. Clean Water Act (CWA). The CWA applies to facilities that place pollutants into bodies of water. The CWA affects groundwater, storm water, surface water (lakes, rivers, and streams), marshes, swamps, wetlands, coastlines, and navigable waterways (canals). Soldiers comply with the CWA by—

- Disposing of chemicals, solvents, and HW properly. Never dispose of them in storm drains, sinks, toilets, or drains.
- Washing vehicles in approved wash racks only.
- Cleaning up spills in the work area immediately.
- Reporting spills through the chain of command.

d. Clean Air Act (CAA). The CAA requires the Army to prevent, control, and/or reduce air pollution from nontactical vehicles, facilities, and operations. Soldiers comply with the CAA by —

- Checking with the local environmental office before using gas or smoke.

- Meeting state inspection standards for privately owned vehicles (POVs).
- Observing local fire and burning restrictions.
- Following local dust control guidelines on tank trails and range roads.
- Keeping solvent vats closed when not in use.
- Using paints and thinners correctly with proper equipment (paint application techniques and paint booths).
- Maintaining and operating equipment (engines, boilers, and generators) properly to reduce air pollution problems.
- Ensuring that air conditioning systems in POVs and government vehicles are serviced only by individuals who are properly trained and certified.

e. National Historic Preservation Act (NHPA). The NHPA safeguards against the loss of irreplaceable historical, archaeological, and cultural properties. The NHPA requires Army installations to identify and safeguard possible archeological and historical sites, artifacts, and structures. It also requires the Army to protect and preserve the historical sites located on its installations. Soldiers comply with the NHPA by—

- Leaving historical and prehistorical artifacts and sites undisturbed.
- Reporting the discovery of artifacts and sites to the chain of command.
- Reporting vandalism, theft, and damage to historical, cultural, and archaeological sites.
- Planning and conducting training, operations, and logistics activities to avoid damaging historical and archaeological sites.

f. Endangered Species Act (ESA). The ESA protects threatened and endangered plants and animals. Army installations often include natural areas that are the last remaining refuge for endangered plants and animals. Almost every military training area has some endangered species. Soldiers comply with the ESA by—

- Recognizing signs and markers that indicate protected habitat areas.
- Avoiding marked-off habitat areas during training and operations.
- Following installation regulations for hunting, fishing, and camping.
- Obeying range control guidelines for cutting brush and trees for camouflage.

g. Federal Facilities Compliance Act (FFCA). The FFCA allows the EPA and the states to inspect and fine Army installations that violate environmental laws identified in the RCRA. The FFCA also allows federal, state, and local environmental agencies to prosecute soldiers who knowingly violate environmental laws during the performance of their duties. Soldiers comply with the FFCA by—

- Cooperating with the environmental inspectors.

- Performing self-assessments of their work area to ensure that they are complying with environmental guidelines.
- Informing their chain of command when they discover environmental problems.

h. Noise Control Act (NCA). The NCA promotes an environment that is free from noise that jeopardizes health or welfare. The Army must comply with all federal, state, and local requirements, respecting the control of noise unless doing so conflicts with the military mission. Soldiers comply with the NCA by—

- Avoiding unnecessary noise.
- Respecting noise buffer zones, minimum flight altitudes, no-fly zones, and nighttime curfews designated by the installation.

4-3. State Law. Each state has its own regulatory organization charged with developing and implementing environmental regulations. Most federal statutes allow states to set standards that are at least as stringent as federal requirements. When the EPA approves a state's program, the state has primary responsibility and authority for that particular program. Some state governments have additional environmental laws. Actions allowed by the environmental laws of one state may be illegal in another state. The installation environmental coordinator knows the state laws that apply to the installation. Soldiers must comply with federal, state, local, and applicable HN regulations.

4-4. Local Law. Local laws and ordinances address the concerns of the local communities. Generally, local laws will be based on federal and state laws. However, each municipality or community may place more stringent restrictions on certain activities. Noise restrictions during certain hours of the day are very common. It is highly unlikely that local environmental ordinances will extend to military installations, since most installations are not within municipal boundaries. However, the potential for conflict exists when installations are located close to cities and towns.

4-5. Host Nation Law. Many of the countries to which soldiers might deploy also have different environmental requirements. Army units in foreign countries must follow the environmental guidelines of the HN. When units deploy to other states or countries, leaders should inform them of changes in environmental requirements. Status of Forces Agreements (SOFAs) that permit or require standards other than those of the host country are considered part of the environmental pollution abatement standards. These apply to the Army in the host country or its jurisdiction. Apply AR 200-1 (with specific references to paragraph 1-24) and AR 200-2 to fulfilling outside continental United States (OCONUS) environmental protection requirements.

4-6. Environmental Penalties. Federal and state environmental regulatory agencies can impose penalties on the Army for violating environmental laws. These penalties include fines, increased monitoring and intervention by environmental regulators, and damage awards from lawsuits.

- a. Soldiers should be aware of and understand environmental laws to ensure the installation or individuals on the installation do not incur any penalties. The local Judge Advocate General (JAG) office is best equipped to advise soldiers on exactly what must be done in a given

situation to comply with the law. However, a basic understanding of legal principles will assist soldiers in making good decisions and working with legal counsel, if the need should arise.

b. A soldier who violates environmental law or allows others to do so can be prosecuted by military authorities under the Uniform Code of Military Justice (UCMJ) or in Federal District Court. If convicted of environmental violations, individuals can receive fines up to \$50,000 per day of violations and imprisonment up to two years.

c. There are two ways to violate environmental laws and regulations: through negligence and through purposeful acts. Violations can subject military installations to fines and civil suits. Personnel should consult the local JAG office for the latest changes in or interpretations of laws and regulations. Violations of environmental laws, whether intentional or not, are treated the same by regulators and inspectors. Unintentional violations due to negligence can be prevented through training and education. Purposeful violations must be prevented by the chain of command and individuals' moral sense.

(1) Negligence. Negligent actions are careless, delinquent actions, and commanders, leaders, or supervisors must know about them. Supervisors are responsible for ensuring that soldiers perform their duties correctly. Therefore, if a soldier is negligent or careless, the supervisor is guilty of negligence even if the supervisor is unaware of the act. For example, assume the chain of command failed to ensure that all concertina or communications wire was collected and stored following a field exercise. The chain of command is responsible for damage or injury to personnel or wildlife that becomes entangled in or injured by the wire. Another example of negligence is failing to ensure that hazardous materials, such as solvents, are stored and accounted for properly. The chain of command is responsible for those containers when they leak and contaminate soil, groundwater, or nearby streams.

(2) Purposeful Acts. These environmentally damaging actions are deliberately directed or performed by a commander, leader, or supervisor who has full knowledge of the action's illegality. If someone deliberately performs or directs an action knowing that it is illegal, that individual is culpable or guilty. For example, if a supervisor directs a soldier to dispose of used parts in a pond located in a secluded part of the post, the supervisor has deliberately broken the law. Claiming ignorance is no excuse. The POL and the corrosion from the parts will contaminate the pond and eliminate its value as a source of drinking water, habitat, and recreation. Common sense dictates that this action was improper and reflected poor judgment on the part of the supervisor. The chain of command should prevent intentional violations to every extent possible.

d. Procedural and substantive requirements. Environmental legislation may contain procedural or substantive requirements, or both.

(1) Procedural requirements describe a procedure or method that must be followed to achieve a specified goal or policy. The NEPA, for instance, specifically requires that federal decision makers follow certain procedures to document their consideration of environmental effects of actions. If a procedural requirement is violated, the penalty may

be an order to halt the proposed action or project until the prescribed procedure has been followed to the satisfaction of the court. There is no direct fine or prison term imposed; however, there may be an indirect monetary cost associated with delays to the project and efforts to quickly comply with the procedural requirement.

(2) Substantive requirements define rights and restrictions. A typical substantive requirement would be limiting allowable discharges of air or water pollutants under the terms of a permit. For example, the permit required under the CWA for discharging pollutants into surface waters limits the quantities of various pollutants in water on a daily, monthly, or annual basis.

(3) If a military installation is found guilty of violating a substantive requirement, it may be fined or issued a directive from the regulatory agency to halt the polluting action immediately. If a knowing and willful violation of any criminal prohibition within the law can be proven, larger fines and permanent shutdown can be imposed. If an individual commits such a criminal violation, a personal fine and/or prison sentence can be imposed just as with any other type of criminal case.

(4) Several military installations have received fines or stop-action directives for substantive violations, primarily from state authorities. Such directives were levied, by name, to the individual who signed the permit, usually the installation commander. Fines were normally paid from the installation's operating budget. An installation can sometimes negotiate for reduced fines based on corrective actions taken or scheduled after the regulator first proposes them.

(5) Military and civilian employees of the Army have had adverse career actions taken by their employers for causing violations against the installation. Some federal employees have received criminal indictments for violating environmental laws. The Army cannot defend the employee against federal charges.

(6) Regulatory agencies are becoming more aware of their authority and more familiar with how to use the laws and courts to enforce environmental laws. Most will not hesitate to use their authority regarding military installations. If they are convinced that the installation is making a good faith effort, most regulators will allow an installation a reasonable amount of time to comply with substantive requirements. Similarly, command emphasis is necessary to ensure that such a good faith effort actually occurs.

e. Lawsuits against the Military. The legal doctrine of sovereign immunity states that the government can only be sued with its own consent. This doctrine has its foundation in the English common-law idea, which states that a king cannot break a law, since he is the lawmaker in the first place.

(1) Recent court decisions have noted significant exceptions to this doctrine. Environmental suits may be brought against a government official alleging that he or she has acted as an individual and not in an official capacity or alleging that the official has exceeded statutory authority. Congress probably intended that the Administrative

Procedures Act, as well as a number of other statutes, subject some actions of government officials to judicial review.

(2) Most environmental laws have clauses that specifically waive certain sovereign immunity privileges. Generally, federal organizations are subject to the agency that has the permit management and enforcement authority for a particular environmental law in that organization's geographical area. For instance, under the CWA, individual states are allowed to issue and monitor permits for the discharge of pollutants into surface waters. The EPA has relinquished this authority to the state. A military installation must obtain the necessary permits from the state, submit reports to the state, and comply with all state-imposed effluent limitations.

(3) States may impose sanctions, such as fines, against federal polluters only to the extent that Congress allows. States can fine federal agencies for air permit and HW violations.

f. Citizen Suits. Traditionally, if a citizen wanted to sue the government or one of its officers, a case or controversy had to exist, and that person had to have a personal stake in the outcome. This situation usually arises when the individual was injured or could show economic damages. However, the courts have recently said that a person's interest or stake in the outcome could be aesthetic, conservational, or recreational. Most environmental laws authorize citizens to sue the US or any other violator of these acts. To exercise this right, the citizen must provide a 60-day notice to the alleged polluter, the EPA, and the state. The citizen's cost of litigation can be reimbursed if the court upholds the allegation.

4-7. Summary. Army environmental regulations are based on federal laws. State and local environmental laws apply to the area where soldiers live and work. When soldiers live in a foreign country, HN laws also apply. The Army will obey all environmental laws that apply to its installations, and the Army expects soldiers to do the same.

Lesson 4

Practice Exercise

Instructions The following exercises are study aids. Answer each question in the space provided. When you have finished, print this sheet and compare your answers with those given by following the link at the bottom of this page. Review the lesson as necessary.

1. What are the four primary sources of environmental laws?

2. Describe the two ways in which military members can violate environmental laws?

3. Name key federal acts that protect the environment.

4. Which federal law covers the preservation of historical sites and structures?

5. What act allows regulatory agencies to impose civil fines on other federal agencies, such as the DA?

Practice Exercise Answers

1. What are the four primary sources of environmental laws?

Federal, state, local and HN. ([para 4-1](#))

2. Describe the two ways in which military members can violate environmental laws?

Through negligence and through purposeful acts. ([para 4-6c](#))

3. Name key federal acts that protect the environment.

The following are a list of the key federal acts:

- National Environmental Policy Act (NEPA)
- Resource Conservation and Recovery Act (RCRA)
- Clean Water Act (CWA)
- Clean Air Act (CAA)
- National Historic Preservation Act (NHPA)
- Endangered Species Act (ESA)
- Federal Facilities Compliance Act (FFCA)
- Noise Control Act (NCA)

([para 4-2a through h](#))

4. Which federal law covers the preservation of historical sites and structures?

The National Historic Preservation Act (NHPA) safeguards against the loss of irreplaceable historical, archaeological and cultural properties.

([para 4-2e](#))

5. What act allows regulatory agencies to impose civil fines on other federal agencies, such as the DA?

The FFCA allows the EPA and the states to inspect and fine Army installations that violate environmental laws identified in the RCRA. ([paragraph 4-2g](#))

APPENDIX A
LIST OF COMMON ACRONYMS

ACCP	Army Correspondence Course Program
AIPD	Army Institute for Professional Development
ALM	Army Logistic Management
AR	Army regulation
AUTOVON	automatic voice network
AVN	automatic voice network
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CP	collection point
CS	riot control agent
CWA	Clean Water Act
DA	Department of the Army
DETC	Distance Education and Training Council
DOD	Department of Defense
DOT	Department of Transportation

DSN	Defense Switched Network
DS2	decontaminant solution 2
EA	environmental assessment
EIS	environmental-impact statement
EN	engineer
EOD	explosive ordnance disposal
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FFCA	Federal Facilities Compliance Act
FM	field manual
G3	Assistant Chief of Staff, Operations and Plans (US Army)
HM	hazardous material
HN	host nation
HW	hazardous waste
ICE	Interservice Correspondence Exchange

ICUZ	installation compatibility-use zone
IPD	Institute for Professional Development
JAG	Judge Advocate General
MI	middle initial
MSDS	material safety data sheet
NBC	nuclear, biological, and chemical
NCA	Noise Control Act
NCO	noncommissioned officer
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
OCONUS	outside continental United States
OPORD	operation order
OPSEC	operations security
POL	petroleum, oils, and lubricants
POV	privately owned vehicle

RCRA	Resource Conservation and Recovery Act
REG	regulation
RYE	retirement year ending
S3	Operations and Training Officer (US Army)
SOFA	Status of Forces Agreement
SOP	standing operating procedure
SSN	social security number
STB	super tropical bleach
TC	training circular
TM	technical manual
TRADOC	United States Army Training and Doctrine Command
TSP	training support package
TVT	television tape
UCMJ	Uniform Code of Military Justice
US	United States

APPENDIX B

RECOMMENDED READING LIST

The following publications provide additional information about the material in this subcourse. You do not need these materials to complete this subcourse.

AR 200-1. *Environmental Protection and Enhancement*. 21 February 1997.

AR 200-2. *Environmental Effect of Army Actions*. 23 December 1988.

AR 200-3. *National Resources—Land, Forest, and Wildlife Management*. 28 February 1995.

AR 200-4. *Cultural Resources Management*. 1 October 1998.

AR 200-5. *Pest Management*. 29 October 1999.

[FM 3-100.4](#). *Environmental Considerations in Military Operations*. 1 June 2000.

FM 6-22. ([FM 22-100](#)) *Army Leadership*. 31 August 1999.

[TC 3-34.489](#). *Soldier and the Environment*. 8 May 2001.

TSP 052-250-1001. *Comply with Host Nation, Federal, State, and Local Environmental Laws and Regulations*. June 2001.

Army Environmental Policy Institute. *US Army Environmental Strategy into the 21st Century*. 1992.

[TVT 5-56P1](#), [TVT 5-56P2](#), [TVT 5-56P3](#). *Operations Stewardship - The Soldier and the Environment*. 20 August 1993.

APPENDIX C

ENVIRONMENTAL CHECKLIST

Soldiers must make decisions to protect the environment every day. Failure to make the right decisions may cause serious damage to the environment. To make sound decisions, identify environmental risks before performing a job, and reduce or eliminate these risks when possible. One way to reduce or eliminate environmental risks is to use a checklist, such as the one shown in [Table C-1](#), which contains information to help prevent environmental damage. For a more encompassing checklist, contact the local command and see [FM 3-100.4](#), Appendix H.

Table C-1. Environmental Checklist

Vehicle Maintenance	
<input type="checkbox"/>	Place drip pans, diapers, or absorbents under vehicles.
<input type="checkbox"/>	Maintain vehicles and equipment according to TM specifications.
<input type="checkbox"/>	Clean up spills immediately.
<input type="checkbox"/>	Collect used rags in a dirty rags container.
<input type="checkbox"/>	Collect used dry sweep compound for reuse.
<input type="checkbox"/>	Recycle solvents and coolants.
<input type="checkbox"/>	Return damaged parts and assemblies to the supply facility for rebuilding or recycling.
<input type="checkbox"/>	Locate waste accumulation containers close to the source of the waste products.
<input type="checkbox"/>	Label and date waste accumulation containers.
Weapons Maintenance	
<input type="checkbox"/>	Dispose of contaminated patches and cleaning equipment properly.
<input type="checkbox"/>	Reuse cleaning equipment and lubricant containers when possible.
<input type="checkbox"/>	Purchase lubricants in bulk, and refill smaller containers.
<input type="checkbox"/>	Recycle cleaning solvents.
<input type="checkbox"/>	Keep the lids on solvent vats closed when not in use.
NBC Equipment Maintenance	
<input type="checkbox"/>	Keep a copy of the applicable MSDS for each HM on hand in a binder.

<input type="checkbox"/>	Collect HM (used filters, decontamination materials, and cleaning solutions) at the point of generation, and dispose of them properly.
<input type="checkbox"/>	Mark and turn in damaged equipment.
<input type="checkbox"/>	Reuse mask carriers and cleaning equipment.
<input type="checkbox"/>	Store DS2 and super tropical bleach (STB) containers in separate locations that are dry and well ventilated.
<input type="checkbox"/>	Dispose of HW and batteries according to the unit SOP.
<input type="checkbox"/>	Turn in excess repair parts so that other units can use them.
<input type="checkbox"/>	Ensure that DS2 containers have drip pans or other forms of secondary containment under them.
<input type="checkbox"/>	Dispose of out-of-date, chemical agent kits properly as HW.
Supply, Storage, and Transportation	
<input type="checkbox"/>	Substitute less hazardous solvents and cleaning solutions when permitted.
<input type="checkbox"/>	Select items that have less packaging.
<input type="checkbox"/>	Take leftover items (such as paint or excess parts) to the installation reissue center.
<input type="checkbox"/>	Store materials according to MSDS guidelines.
<input type="checkbox"/>	Keep a copy of the applicable MSDS for each HM on hand in a binder.
<input type="checkbox"/>	Label and date new supplies.
<input type="checkbox"/>	Place new supplies to the back of the storage area.
<input type="checkbox"/>	Issue older supplies first.
<input type="checkbox"/>	Avoid stockpiling or keeping items around "just in case they are needed."
<input type="checkbox"/>	Keep recycling container free of trash and garbage.
<input type="checkbox"/>	Turn in excess or damaged repair parts and tools, as stated in the unit maintenance or supply SOP.
<input type="checkbox"/>	Turn in excess paint, solvents, cleaners, and supplies to the installation supply point.
<input type="checkbox"/>	Reuse containers when possible.
<input type="checkbox"/>	Purchase cleaning solvents and lubricants in bulk, and refill smaller containers as needed.

<input type="checkbox"/>	Recycle materials as required by the installation recycling program.
<input type="checkbox"/>	Dispose of solid waste and HW according to local policy.
<input type="checkbox"/>	Transport paint, solvents, cleaners, and other HW and HM safely, as required by existing requirements. Ensure that there are proper placards and that appropriate spill containment equipment is with the vehicle.
Refueling	
<input type="checkbox"/>	Report spills immediately.
<input type="checkbox"/>	Place the refueling nozzle in a drip pan, not on the ground.
<input type="checkbox"/>	Place drip pans, diapers, or absorbent material (such as floor sweep) under vehicles when refueling.
<input type="checkbox"/>	Place fuel cans in a drip pan for refueling or storage.
<input type="checkbox"/>	Ensure that each refueling vehicle has a least two fire extinguishers.
<input type="checkbox"/>	Ensure that a properly stocked spill kit is readily available.
<input type="checkbox"/>	Ensure that potable water is available for emergency eye washing.
<input type="checkbox"/>	Reuse overpack drums to transfer contaminated soil.
<input type="checkbox"/>	Recycle used or contaminated POL products.
<input type="checkbox"/>	Dispose of contaminated soil and absorbents according to installation policy.
Field Sanitation/Field Mess	
<input type="checkbox"/>	Enforce the use of field latrines instead of expedients such as "catholes."
<input type="checkbox"/>	Collect litter and solid waste at the source (for example, mess site, aid station, or issue point).
<input type="checkbox"/>	Store perishable items properly to reduce spoilage.
<input type="checkbox"/>	Reuse waste accumulation containers.
<input type="checkbox"/>	Ensure that waste accumulation containers have lids that keep out weather and pests.
<input type="checkbox"/>	Store motor gas containers properly at all times. They should be closed, with no open funnels or tubes attached.
<input type="checkbox"/>	Conduct filling operations on a tarp or a plastic liner with a soil berm or sandbag perimeter for secondary containment in the event of a spill.

- ☐ Conduct lighting operations on open soil so that any residual fuel will freely burn during the operation.

Maneuver Damage Control

- ☐ Identify environmental risks before going to the field.
- ☐ Brief personel on maneuver damage considerations and minimization measures.
- ☐ Develop a plan to minimize or eliminate environmental risks.
- ☐ Identify areas that contain historical and prehistorical sites, buildings and structures, and Native American sacred sites.
- ☐ Identify areas that contain threatened or endangered species.
- ☐ Observe convoy restrictions.
- ☐ Cross streams and ditches only at approved crossing points.
- ☐ Drive carefully in forested areas to avoid damaging vegetation.
- ☐ Drive only on approved roads and trails.
- ☐ Avoid unnecessary noise by not revving engines.
- ☐ Fill in all fighting positions at the end of training.
- ☐ Secure cargo properly.
- ☐ Use camouflage netting instead of live vegetation.
- ☐ Reuse wire, barrier materials, and sandbags.
- ☐ Recycle materials at collection points.

Field Recovery

- ☐ Return all waste to the containment area for proper disposal. Do not burn or bury waste material.
- ☐ Recover all expended brass, communications wire, concertina, booby traps, and barrier material.
- ☐ Do not pour materials into storm drains.
- ☐ Wash equipment at approved wash sites that have oil-water separators.
- ☐ Use only approved solvents or detergents when washing vehicles.
- ☐ Reuse cleaning brushes and rags.

- ☐ Recycle worn out and damaged equipment.

Weapons Training and Demolition

- ☐ Check with range control for artillery noise buffer zones near the installation.
 - ☐ Check with airfield operations concerning no-fly zones.
 - ☐ Adhere to nighttime gunnery curfews.
 - ☐ Keep demolitions below the maximum permissible weight specified by range control.
 - ☐ Avoid excessive vehicle noise when homes are located near range roads.
 - ☐ Use the forest and the terrain as buffers between noisy training and noise-sensitive areas.
 - ☐ Aim firearms away from noise-sensitive areas.
 - ☐ Avoid detonating large charges when the wind is blowing from the demolition ground toward noise-sensitive sites or when temperature inversions are present.
 - ☐ Avoid making noise in the habitat of endangered species.
 - ☐ Respect noise buffer zones and altitude restrictions in forest service land or other areas of exceptional quiet.
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